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AMENDMENT TO THE CLAIMS

Please amend claims 1-17 as indicated.

1. (Currently Amended) An ~~electronics~~ device comprising: a radio device which operates at a frequency of ~~at least 130~~ 31-300 or greater than 500 MHz; an antenna comprising an antenna body embedded in a rubber material; and, an insulating coating surrounding at least the antenna body, the insulating coating having a dielectric constant less than a dielectric constant of the rubber material, a surface resistivity of at least 10^{12} ohms/sq, a volume resistivity of at least 10^{9} ohms*cm, and a dissipation factor less than 0.03.

2. (Currently Amended) The ~~radio frequency~~ electronic device as claimed in claim 1, wherein the coating is at least 0.02 mm thick.

3. (Currently Amended) The ~~radio frequency~~ electronic device as claimed in claim 2, wherein the coating is at least 0.1 mm thick.

4. (Currently Amended) The ~~radio frequency~~ electronic device as claimed in claim 1, wherein the coating is formed of parylene and is at least 0.015 mm thick.

5. (Currently Amended) The ~~radio frequency~~ electronic device as claimed in claim 1, wherein dielectric constant of the insulating coating is less than 3.

6. (Cancelled)

7. (Currently Amended) The ~~radio frequency~~ electronic device as claimed in claim 1, wherein the coating material is selected from the group consisting of electrical shrink tubing, thermoplastic polycarbonate, butadiene rubber, low carbon rubber, isocyanate based adhesive, polyethylene, insulating varnish, epoxy, TPE cellulose acetate, parylene, and insulating polyester varnish.

8. (Currently Amended) The ~~radio frequency~~ electronic device as claimed in claim 1, wherein the rubber material forms a patch for attaching to a surface of a tire.

9. (Currently Amended) The ~~radio frequency~~ electronic device as claimed in claim 1, wherein the rubber material forms a portion of a tire.

10. (Currently Amended) A tire having a radio frequency device with an antenna integrated therein, the tire comprising a carcass reinforcement and rubber material layers applied to said carcass, the radio frequency device comprising: a radio device which operates at a frequency of ~~at least 130~~ 31-300 or greater than 500 MHz; an antenna body connected to the radio device; and, an insulating coating surrounding at least the antenna body, the insulating coating having a dielectric constant less than a dielectric constant of the rubber material layers, a surface resistivity of at least 10^{12} ohms/sq, a volume resistivity of at least 10^{9} ohms*cm, and a dissipation factor less than 0.03.

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11. (Original) The tire having a radio frequency device as claimed in claim 10, wherein the insulating coating is at least 0.02 mm thick.

12. (Original) The tire having a radio frequency device as claimed in claim 10, wherein the insulating coating is at least 0.1 mm thick.

13. (Original) The tire having a radio frequency device as claimed in claim 10, wherein dielectric constant of the insulating coating is less than 3.

14. (Cancelled)

15. (Previously Amended) The tire having a radio frequency device as claimed in claim 10, wherein the coating material is selected from the group consisting of electrical shrink tubing, thermoplastic polycarbonate, butadiene rubber, low carbon rubber, isocyanate based adhesive, polyethylene, insulating varnish, epoxy, TPE cellulose acetate, parylene, and insulating polyester varnish.

16. (Currently Amended) The tire having a radio frequency device as claimed in claim 15, wherein the coating material is parylene and the coating has a thickness of at least 0.15 ~~rhm~~ mm.

17. (Original) The tire having a radio frequency device as claimed in claim 10, wherein

the antenna is embedded in a rubber patch adhered to a surface of the tire.

18. (Original) The tire having a radio frequency device as claimed in claim 10, wherein the antenna is embedded in a structural portion of the tire.

19. (Original) The tire having a radio frequency device as claimed in claim 10, wherein the coating is formed by a rubber material layer of the tire.

20. (Currently Amended) A tire having a radio frequency device integrated therein, the tire comprising a carcass reinforcement and rubber material layers applied to said carcass, the radio frequency device comprising: a radio device which operates at a frequency of ~~at least 130~~ 31-300 or greater than 500 MHz; an antenna body connected to a transponder; wherein, a rubber material layer in which the antenna is embedded has a dielectric constant less 3, a surface resistivity of at least 10^{12} ohms/sq, a volume resistivity of at least 10^{9} ohms*cm, and a dissipation factor less than 0.03.

21. (Currently Amended) A method for ~~embedding~~ utilizing a radio frequency antenna ~~in~~ with a tire, comprising the steps of: forming an antenna element; coating the antenna element with an insulating coating, the coating having a dielectric constant lower than a dielectric constant of an elastomeric material, a surface resistivity of at least 10^{12} ohms/sq, a volume resistivity of at least 10^{9} ohms*cm, and a dissipation factor less than 0.03, the coating being formed at least 0.02 mm thick; and, embedding the coated antenna element in the elastomeric material for integration with the tire.

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22. (Cancelled)

23. (Original) The method as claimed in claim 21, wherein the coating material has a thickness of at least 0.1 mm.

24. (Previously Amended) The method as claimed in claim 21, wherein the coating material is selected from the group consisting of electrical shrink tubing, thermoplastic polycarbonate, butadiene rubber, low carbon rubber, isocyanate based adhesive, polyethylene, insulating varnish, epoxy, TPE cellulose acetate, parylene, and insulating polyester varnish.

25. (Original) The method as claimed in claim 21, further comprising the step of tuning the antenna for resonant frequency for the elastomeric material.

26. (Original) The method as claimed in claim 21, wherein the elastomeric material is a rubber patch, and further comprising the step of adhering the patch to a surface of the tire.

27. (Original) The method as claimed in claim 21, wherein the elastomeric material is a portion of the tire.